



US008945368B2

(12) **United States Patent**
Rieke et al.

(10) **Patent No.:** **US 8,945,368 B2**
(45) **Date of Patent:** **Feb. 3, 2015**

(54) **SEPARATION AND/OR SEQUESTRATION
APPARATUS AND METHODS**

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(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **13/748,463**

(22) Filed: **Jan. 23, 2013**

(65) **Prior Publication Data**

US 2013/0186775 A1 Jul. 25, 2013

Related U.S. Application Data

(60) Provisional application No. 61/589,704, filed on Jan.
23, 2012.

(51) **Int. Cl.**
B01D 19/00 (2006.01)
B01D 53/96 (2006.01)
(Continued)

(52) **U.S. Cl.**
CPC **B01D 19/0073** (2013.01); **B01D 53/1425**
(2013.01); **B01D 53/1475** (2013.01); **B01D**
53/965 (2013.01); **Y02C 10/06** (2013.01)
USPC **205/555**; 204/234; 204/275.1; 205/349

(58) **Field of Classification Search**
CPC B01D 19/0073; B01D 19/0084; B01D
53/1475; B01D 53/965; B01D 2257/504;
B01D 53/326
USPC 204/234, 275.1, 277, 278, 278.5;
205/687, 349, 555

See application file for complete search history.

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(57) **ABSTRACT**

Apparatus for separating CO₂ from an electrolyte solution are provided. Example apparatus can include: a vessel defining an interior volume and configured to house an electrolyte solution; an input conduit in fluid communication with the interior volume; an output conduit in fluid communication with the interior volume; an exhaust conduit in fluid communication with the interior volume; and an anode located within the interior volume. Other example apparatus can include: an elongated vessel having two regions; an input conduit extending outwardly from the one region; an output conduit extending outwardly from the other region; an exhaust conduit in fluid communication with the one region; and an anode located within the one region. Methods for separating CO₂ from an electrolyte solution are provided. Example methods can include: providing a CO₂ rich electrolyte solution to a vessel containing an anode; and distributing hydrogen from the anode to acidify the electrolyte solution.

18 Claims, 9 Drawing Sheets

